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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,144	04/30/2002	Dino Manfredi	218450US6PCT	8134
22850	7590	01/25/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			OSELE, MARK A	
			ART UNIT	PAPER NUMBER
			1734	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/030,144

Applicant(s)

MANFREDI ET AL.

Examiner

Mark A Osele

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) 18-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-17 and 26-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01282002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on November 4, 2004 is acknowledged. The traversal is on the ground(s) that the citation of Doiron is an indication that the claims of Group II have already been searched. This is not found persuasive because all of the features of Group II have not been searched, only those features that also were claimed in Group I as proof that the two inventions do not contain the same corresponding special technical feature.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 15-17 and 26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jones. Jones shows a method of introducing a chemical compound into an extruder comprising: introducing a material into the extruder (column 1, lines 23-35); introducing at least one mixture of a chemical compound and carbon dioxide into the extruder (column 5, lines 14-37) by an introduction device comprising two pumps, 14, 30, a mixing chamber, A, and an injector; and extruding the material together with the mixture. Jones appears to show in the figures that the injector is perpendicular to the barrel of the extruder, but even if this is not clearly shown it would have been obvious to one of ordinary skill in the art that placing the injector perpendicular to the barrel of the extruder would guarantee interaction between the material in the extruder and the mixture being injected.

Regarding claims 16 and 17, the material to be extruded and the chemical compound are in fluidized states.

Regarding claim 26, Jones shows the carbon dioxide to be precooled. Also claim 26 requires that the extruder comprise a feed zone, a compression zone, and a discharge zone all of which are conventional extruder elements.

5. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Akimoto et al. As shown in paragraph 4 above, Jones shows all of the instantly claimed limitations except for a reaction between one of the chemical compounds and the polymeric material. Akimoto et al. teaches that a cross-linking agent can be concurrently injected with a blowing agent into an extruder (column 2,

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lines 40-51, 60-68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to mix the cross-linking agent of Akimoto et al. into the carbon dioxide blowing agent mixture of Jones because Akimoto et al. teaches the need for both a blowing agent and a cross-linking agent Jones teaches that if two or more chemical compounds are being simultaneously injected into an extruder it is advantageous to mix them prior to injection.

Claim Objections

6. Claims 26, 27, and 28 are objected to because of the following informalities: They depend from withdrawn claim 23. It is suggested that applicants add the limitations of claim 23 directly into the examined claims. Appropriate correction is required.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wilkes shows two chemical compounds injected into an extruder either through the same injection port or one perpendicular to it. Yorita et al. shows injectors perpendicular to the barrel of an extruder.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark A Osele whose telephone number is 571-272-1235. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on 571-272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MARK A. OSELE
PRIMARY EXAMINER

January 24, 2005